Replace the paragraph beginning on page 2, line 21, with the following:

B1

--The exendins have some sequence similarity to several members of the glucagon-like peptide family, with the highest homology, 53%, being to GLP-1[7-36]NH_2 [SEQ. ID. NO. 3] (Goke, et al., J. Biol. Chem., 268:19650-55, 1993). GLP-1[7-36]NH_2, also sometimes referred to as proglucagon[78-107] or simply "GLP-1" as used most often herein, has an insulinotropic effect, stimulating insulin secretion from pancreatic beta-cells; Glucagon-like peptide-1 (GLP-1) has also been reported to inhibit glucagon secretion from pancreatic alpha-cells (Ørsov, et al., Diabetes, 42:658-61, 1993; D'Alessio, et al., J. Clin. Invest., 97:133-38, 1996). GLP-1 has been reported to inhibit gastric emptying (Willms B, et al., J Clin Endocrinol Metab 81 (1) : 327-32, 1996; Wettergren A, et al., Dig Dis Sci 38 (4): 665-73, 1993), and gastric acid secretion (Schjoldager BT, et al., Dig Dis Sci 34 (5): 703-8, 1989; O'Halloran DJ, et al., J Endocrinol 126 (1): 169-73, 1990; Wettergren A, et al., Dig Dis Sci 38 (4): 665-73, 1993)). GLP-1[7-37], which has an additional glycine residue at its carboxy terminus, is reported to stimulate insulin secretion in humans (Ørskov, et al., Diabetes, 42:658-61, 1993). A transmembrane G-protein adenylate-cyclase-coupled receptor said to be responsible at least in part for the insulinotropic effect of GLP-1 has reportedly been cloned from a beta-cell line (Thorens, Proc. Natl. Acad. Sci. USA 89:8641-45, 1992). GLP-1 has been the focus of significant investigation in recent years due to its reported action on the amplification of stimulated insulin production (Byrne MM, Goke B. Lessons from human studies with glucagon-like peptide-1: Potential of the gut hormone for clinical use. In: Fehmann HC, Goke B. Insulinotropic Gut Hormone Glucagon-Like Peptide 1. Basel, Switzerland: Karger, 1997:219-33).--

Replace the paragraph on page 15, lines 24-26, with the following:

B2 --Figures 3A and 3B depict the amino acid sequences for certain exendin agonist compounds useful in the present invention [SEQ. ID. NOS. 10 to 40].--

Replace the paragraph on page 15, lines 27-28, with the following:

B3 --Figures 4A1-4J depict the amino acid sequences for certain compounds of the present invention, Compounds 1-174 [SEQ. ID. NOS. 49 to 222].--

Replace the paragraph beginning on page 18, line 22, with the following:

B4 --In support of the investigation of the nonclinical pharmacokinetics and metabolism of exendin-4, a number of immunoassays have been developed. A radioimmunoassay with limited sensitivity (~100 pM) was used in initial pharmacokinetic studies. A two-site immunoradiometric assay (IRMA) for exendin-4 was subsequently validated with a lower limit of quantitation of 15 pM. The bioavailability of exendin-4, given subcutaneously, was found to be approximately 50-80% using the radioimmunoassay. This was similar to that seen following intraperitoneal administration (48-60%). Peak plasma concentrations (C_{max}) occurred between 30 and 43 minutes (T_{max}). Both C_{max} and area under curve (AUC) values were monotonically related to dose. The apparent terminal half-life for exendin-4 given subcutaneously was approximately 90-110 minutes. This was significantly longer than the 14-41 minutes seen following intravenous dosing. Similar results were obtained using the IRMA. Degradation studies with exendin-4 compared to GLP-1 indicate that exendin-4 is relatively resistant to degradation.--

Replace the paragraph on page 55, lines 30-34, with the following:

B5

--Such pharmaceutical compositions are useful in causing glucagon to be lowered in a subject and may be used as well in other disorders where lowered or suppressed glucagon is beneficial.--

Replace the paragraph beginning on page 56, line 16, with the following:

B6

--Generally, in treating or preventing elevated, inappropriate, or undesired post-prandial blood glucagon levels, the compounds of this invention may be administered to patients in need of such treatment in dosage ranges similar to those given above, however, the compounds are administered more frequently, for example, one, two, or three times a day. Particularly preferred are the exendin and exendin agonist formulations and dosages and routes of administration thereof described in commonly owned U.S. Provisional Application 60/116,380, entitled "Novel Exendin Agonist Formulations And Methods of Administration Thereof," filed January 14, 1999 (and the corresponding PCT application claiming priority from it that was filed on January 14, 2000, Serial No. PCT/US00/00902), and U.S. Provisional Application 60/175,365, entitled "Use of Exendins and Agonists Thereof for Modulation of Triglyceride Levels and Treatment of Dyslipidemia," filed January 20, 2000, from which this application claims priority and the disclosures of which have been incorporated by reference in their entirety as if fully set forth herein.--

Replace the paragraph beginning on page 58, line 14, with the following:

B7

--The solution containing peptide was applied to a preparative C-18 column and purified (10% to 40% Solvent B in Solvent A over 40 minutes). Purity of fractions was determined isocratically using a C-18 analytical column. Pure fractions were pooled furnishing the above-identified peptide.

Analytical reversed-phase high performance liquid chromatography (RP-HPLC) (gradient 30% to 60% Solvent B in Solvent A over 30 minutes) of the lyophilized peptide gave product peptide having an observed retention time of 19.2 minutes.

Replace the paragraph bridging pages 64 and 65 with the following:

--Many of the methods for covalent attachment of PEG take advantage of the epsilon-amino group on lysine. Exendin 4 has two lysines that can be modified by attachment of PEG. An alanine scan of AC3177 (Leu^{14}, Phe^{25}1-28 exendin-4), a shortened analog of exendin 4, revealed positions that are sensitive to substitution by alanine. The two lysines at positions 12 and 27 were moderately affected by this substitution suggesting that loss of the lysine specific R group side chain (methylene chain plus epsilon-amino group) is tolerated. With regard to the full-length peptide, exendin 4, the two lysine positions are appropriate for PEG attachment (see compounds 201 and 202). In addition, depending on the chemistry used to conjugate the PEG, the epsilon-amino groups at these positions may be masked thereby increasing the anionic nature of the peptide.

(201) HGEGTFTSDLSK(PEG)QMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 223]

(202) HGEGTFTSDLSKQMEEEAVRLFIEWLK(PEG)NGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 224].

Replace the paragraph on page 65, lines 5-20, with the following:

--Based on the results of the alanine scan, other likely positions that may be modified by insertion of a Lys-PEG or equivalent, for example, are:

B9 cont.

(203) HK(PEG)EGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 225]

(204) HGEGK(PEG)FTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 226]

(205) HGEGTFTK(PEG)DLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 227]

(206) HGEGTFTSDK(PEG)SKQMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 228]

(207) HGEGTFTSDLK(PEG)KQMEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 229]

(208) HGEGTFTSDLSKK(PEG)MEEEAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 230]

(209)* HGEGTFTSDLSKQMEK(PEG)EAVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 231]

(210)* HGEGTFTSDLSKQMEEK(PEG)AVRLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 232]

(211) HGEGTFTSDLSKQMEEEAK(PEG)RLFIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 233]

(212) HGEGTFTSDLSKQMEEEAVRK(PEG)FIEWLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 234]

(213)* HGEGTFTSDLSKQMEEEAVRLFIK(PEG)WLKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 235]

B9 Conclude

(214) HGEGTFTSDLSKQMEEEAVRLFIEK(PEG)LKNGGPSSGAPPPS-NH_2 [SEQ. ID. NO. 236]

(215) HGEGTFTSDLSKQMEEEAVRLFIEWLKK(PEG)GGPSSGAPPPS-NH_2 [SEQ. ID. NO. 237].--

Replace the paragraph beginning on page 65, line 21, with the following:

--The three positions* above normally containing a glutamic acid that were indicated for modification with K(PEG) can also be modified by conjugation to the glutamic acid side chain carboxyl group, E(PEG).--

B10

Replace the paragraph on page 65, lines 25-28, with the following:

--Another analog in which the Lys-PEG can be added is at the supposed GlyGly turn:

B11

(216) HGEGTFTSDLSKQMEEEAVRLFIEWLKNK(PEG)GPSSGAPPPS-NH_2 [SEQ. ID. NO. 238]

(217) HGEGTFTSDLSKQMEEEAVRLFIEWLKNGK(PEG)PSSGAPPPS-NH_2 [SEQ. ID. NO. 239].--

In the Claims

Please amend the claims as follows: